

Harold N. Moldenke

VERBENA LASIOSTACHYS Link

The type of V. leptostachya was collected by Ynes Wilton Winblad in San Luis Obispo County, California, on June 17, 1937, and is deposited in the herbarium of the California Academy of Sciences at San Francisco, while that of V. lamberti Spreng. is Lejeune s.n., collected from cultivated material in Belgium and deposited in the herbarium of the Jardin Botanique de l'Etat at Brussels. The V. lamberti Ker, referred to in the synonymy of the species here under discussion, is actually V. elegans H.B.K., while the V. lamberti of Penny and of Sims is V. canadensis (L.) Britton; the V. prostrata of Benth is V. lasiostachys var. septentrionalis Moldenke, while that of G. Savi is V. bracteata Lag. & Rodr. Verbena lasiostachys var. abramsi (Moldenke) Jepson is herein regarded as V. abramsi Moldenke, which see.

Verbena lasiostachys has been employed by cytologists in successful hybridization experiments and it is most probable that some of the perplexing specimens seen in herbaria and in the wild represent natural hybrids with related taxa. Hybrids definitely known thus far are with V. halei Small (=xV. scorta Moldenke), with V. hispida Ruiz & Pav. (=xV. lecocqi Moldenke), and with V. urticifolia L. (=xV. inhonesta Moldenke). It almost certainly hybridizes with V. robusta Greene and with V. abramsi in the wild where its range overlaps that of those species. Mattoon (1958) states that V. lasiostachys is offered to the horticultural trade by Clyde Robin.

Walpers (1845) places V. prostrata R. Br. in the synonymy of V. aubletia L. with a question. Jepson (1943) reduces var. scabrida Moldenke and var. septentrionalis Moldenke to the typical form of V. lasiostachys and cites many specimens. Admittedly these varieties are not always as distinct as one would desire, but in my opinion they are definite enough to warrant nomenclatural designation. One, in fact, was actually regarded as a separate species by Kearney (V. nevadensis Kearney). They are probably in the process of becoming stabilized.

Herbarium material of V. leptostachya has been misidentified and distributed rather widely under such names as V. ciliata Benth., V. hastata L., V. menthaefolia Benth., V. officinalis L., V. officinalis L., V. polystachya H.B.K., "V. prostrata var.", V. robusta Greene, and V. urticifolia L.

On the other hand, the Bradshaw 68, Hoover 3812, J. McDonald s.n. [Big Sandy Creek, June 1915], C. V. Meyer 240, S. B. Parish 11590, L. W. Reinecke s.n. [September 5, 1937], Rutter 17, L. C.

Wheeler 3315, and Mrs. W. J. Williamson 189, all distributed as *V. lasiostachys* or *V. prostrata*, are actually *V. lasiostachys* var. *scabrida* Moldenke; Akey 50, Alderson 8464, s.n. [Witch Creek, 1893], & s.n. [Witch Creek, June 1921], Mrs. R. M. Austin s.n., M. S. Baker 14 & s.n. [Morley's Station, May 22], W. H. Baker 4207, J. H. Barber 35 & s.n. [Paso Robles, April 23, 1899], Belshaw 2204, Braunton 100 & 378, W. H. Brewer 31, G. D. Butler 1621, H. P. Chandler 1353, Chesnut & Drew s.n. [Hy-Am-Pum, July 21, 1888], L. Constance 448, W. B. Cooke 15149, Mrs. E. Cooper s.n. [Sta. Barbara, June 1879], Coville & Funston 1110, Davy & Blasdale 5892, G. W. Dunn 566, Eastwood 166, Eggleston 9724, Elmer 3846, Evermann s.n. [Santa Paula, 1881], Ewan 8401, Gifford 197, H. M. Hall 1475, Hansen 1823, A. A. Heller 5785 & 5919, T. M. Hendrix 269 & 1043, Herb. Calif. Polytech. School s.n. [Poly Canon, May 14, 1905], Holman s.n. [Santa Barbara Forest, May 24, 1933], J. T. Howell 174 & s.n. [Grant's Pass, July 3d, 1887], Johannsen 46, A. Kellogg s.n. [near San Francisco, 1866], H. C. Lee 972, C. C. Marshall s.n. [1888], McMurphy 320, Michener & Bioletti s.n. [Oakland, 1891], Morrow, Cook, & Cook 64, R. E. Nelson 159, Nobs & Smith 472, Edw. Palmer 342, W. A. Peterson 307, Pupils of L. A. High School s.n. [May 1902], Rothrock s.n. [Santa Barbara, June 1875], Schulthess s.n. [Kelseyville, July 3, 1931], H. K. Sharsmith 1139 & 3187, Simontacchi 74, C. V. Smith s.n. [Berkeley, June 4, 1906], Staehelin s.n. [U. S. Dept. Agr. Forest Serv. 19562], Mrs. R. W. Summers s.n. [June 13, 1887], J. P. Tracy 2775, 5059, 12632, & 12965, G. R. Vasey s.n. [California, 1875], H. A. Walker 211, and H. S. Yates 3577 are *V. lasiostachys* var. *septentrionalis* Moldenke; Abrams & McGregor 689, E. B. Babcock s.n. [near Pomona, Aug. 24, 1902], Brock 297, J. B. Davy 2859, Kearney 56, M. A. King s.n. [Menifee, 1893], H. L. Mason 8149, Edw. Palmer 309, S. B. Parish s.n. [July 1887] & s.n. [Aug. 1889], Parish & Parish 969, Simontacchi 628, and G. R. Vasey s.n. [San Antonio River, 1880] are *V. abramsi* Moldenke; Suksdorf s.n. [July 22, 1881] is *V. bracteata* Lag. & Rodr.; D. R. Harvey 539 is *V. neomexicana* var. *xylopoda* Perry; Hansen 477 is *V. officinalis* L.; and T. S. Brandegees s.n. [1881], Chesnut s.n. [Oakland], Clokey 5041, J. B. Davy 278, 289, & 865, Elmer 4950, Epling, Darsie, Knox, & Robison s.n. [Flinn Springs, June 19, 1932], F. R. Fosberg S. 4741, S. 4843, & S. 5412, Michener & Bioletti 1886 & s.n. [Leona, Aug. 6, 1892], Morton 8698, C. R. Orcutt 1301, L. W. Reinecke s.n. [Redwood City, June 13, 1937], Schreiber 307, H. A. Walker 696, Wiggins & Demaree 4741, and Wiggins & Gillespie 3977 are *V. robusta* Greene.

Pellett (1923) states that *V. lasiostachys* yields considerable honey in some parts of California. Reichenbach (1827) describes the plant as follows: "Eine neue *Verbena* aus Californien, ein-

jährig, niederliegend, mit kleinen blauen Blüthen, als Zierpflanze nicht zu empfehlen." Nevertheless, it has been cultivated in Germany as early as 1812, in Spain in 1837, in France in 1843, and Junell (1934) records it as cultivated in England (Kew) and Sweden (Uppsala). Bailey (1935) says that Kew handles the seeds. Common names recorded for it are "California vervain", "common vervain", "prostrate vervain", "tubinagua", and "woolly-spiked vervain". It is mentioned by Sharsmith (1945) as occurring in the Mount Hamilton Range, California.

Eastwood (1941) included V. lasiostachys as reported from the Channel Islands under the name of V. prostrata in her concept of V. robusta Greene. She therefore excludes V. lasiostachys from the flora of San Clemente Island (as reported by Munz in 1935), and in this disposition she was followed by Gentry and by me as late as 1959. The San Clemente specimens, however, are plainly V. lasiostachys and not V. robusta!

Verbena lasiostachys is often infested by the fungus, Pleospora herbarum (Fries) Rabh. Felt (1912, 1917) describes a gall in the form of a cylindric swelling of the flower-stalk caused by the Itonid gall-midge, Lasioptera verbenae Felt, based on a specimen collected by P. H. Timberlake in the Puente Hills at Whittier, California, on November 13, 1910. The larvae hibernate in silken tubes attached to the walls of the gall.

Schauer (1847) cites a Douglas collection in the DeCandolle Herbarium at Geneva from California. He affirms that he has seen cultivated material of the species and that it is related to V. stricta Vent. "sed jam crescendi modo et habitu longe diversa." Perry (1933) cites the following 22 additional specimens not yet seen by me: OREGON: Curry Co.: J. C. Nelson 1429 (G). Jackson Co.: M. E. Peck 8702 (E, G). Josephine Co.: J. T. Howell 1249 (E). CALIFORNIA: Lake Co.: Blankinship s.n. [Clear Lake, 12 July 1929] (E); A. A. Heller 5919 (E, G); J. Torrey 417 (G). Los Angeles Co.: Fritchey 29 (E). Mendocino Co.: Chestnut s.n. [20 May-20 June 1898] (W). Monterey Co.: Elmer 4045 (G); Hartweg 1924 (G); A. A. Heller 6778 (E, F, G). San Diego Co.: M. E. Spencer 994 (G), 1164 (G). San Luis Obispo Co.: Mrs. R. W. Summers s.n. [19 June 1887] (E). Santa Clara Co.: Pammel 187 (E). Santa Cruz Co.: M. E. Jones s.n. [Santa Cruz, 21 June 1881] (G, Po). Ventura Co.: Abrams & McGregor 5 (G). She says: "Although, from the original publication, one would naturally infer that V. prostrata is Aiton's species, it is in all probability Robert Brown's. Aiton, in his acknowledgements (postscript to the fifth volume of Hortus Kewensis), mentions the new matter added by his friend Robert Brown, some without reference to his name; more tangible evidence is furnished by Schauer, who, in his monograph, indicates the specimen at Kew as V. prostrata R. Br.

"The species is comparatively easy to distinguish by its decumbent habit, soft villous pubescence, and elongated spikes. It

closely resembles V. robusta, which is much harsher and of limited distribution." The Culbertson 4210, Edw. Palmer 309, S. B. Parish 2819, Parish & Parish 969, and Parry & Lemmon 342 which she cites as being different from V. lasiostachys, but to which she does not assign a name, are V. abramsi Moldenke, as is also the Vasey s.n. [San Antonio River, 1880]. The Parish 11590 which she cites is regarded by me as being V. lasiostachys var. scabrida, while Palmer 342 and Torrey 416 are V. robusta, and Clemens s.n. [Wood's Creek, Fresno Co., 19 June 1910], Braunton 378, Brewer 31, Elmer 3846, Hansen 964 & 1823, Heller 5785, J. C. Nelson 2669, Piper 6160, J. W. Thompson 4412, C. Epling 5445, J. T. Howell 174 & s.n. [Grant's Pass, July 30th, 1887], and Hammond 322 are V. lasiostachys var. septrionalis. The Butler 1621 is in part var. scabrida and in part var. septrionalis, while Wilkes 1661 is in part V. abramsi and in part V. lasiostachys var. septrionalis. Prof. P. H. Raven, in a letter to me dated November 14, 1962, states that there is a sheet of Munz 6734 in the Pomona herbarium.

The following collections need to be re-examined. Although cited by me herein as V. lasiostachys, at least in part, it is most probable that they are not properly so to be regarded: Butler 1621 [probably var. scabrida or var. septrionalis], Heller 5919 [perhaps var. septrionalis], J. T. Howell 11548 [probably var. scabrida], L. C. Wheeler 666 [probably var. septrionalis] and 3315 [probably var. scabrida], and Wiggins 8957 [probably var. scabrida or var. septrionalis]. The Nobs & Smith 868 collection, although regarded by me as var. septrionalis in the California Academy of Sciences herbarium, is definitely typical V. lasiostachys in the University of California herbarium!

In all, 283 herbarium specimens of what I have regarded as the typical form of this species have been examined by me.

Citations: NOOTKA ISLAND: Née 111 (Q). NEW YORK: Kings Co.: Ruger s.n. [Brooklyn, Sept. 16, 1873] (C). OREGON: Douglas Co.: M. E. Jones s.n. [Glendale, June 19, 1902] (Po--70666). Jackson Co.: Applegate 2228 (W--1432734); Cusick 4812 (Pl--121411); E. C. Johnston s.n. [Trail Creek, July 31, 1931] (Gg--192085); M. E. Peck 8702 (Ba, N). Josephine Co.: L. F. Henderson s.n. [Dickson & Drake s.n.] (N). County undetermined: Abrams & McGregor 689 (N); M. E. Jones 29064 [North fork of Noyo River] (Po--188458). CALIFORNIA: Alameda Co.: MacNeil s.n. [King's Run, May 9, '96] (Gg--31351). Calaveras Co.: Bigelow s.n. [Mokelumne Hill] (T); Blaisdell s.n. [Mokelumne Hill] (Gg--31335). Lake Co.: A. A. Heller 5919 (N, Po--54561, Ur); Mrs. L. R. Reynolds s.n. [foot of Mt. Sanhedrin, June 1907] (Gg--31354). Los Angeles Co.: Balls 10065 (S); Bright 8495 (W--1432734); M. L. Bryant 88 (Po--155763); Cohen 502 (Po--267644); Crawford & Hiatt s.n. [Santa Monica Mts., 2/28/16]

(Po—4008); Elmer 3846 (N); Ewan 7540 (En); F. R. Fosberg S.3042 (N); G. B. Grant 1365 (Du—756531), 2575 (Du—75585); H. E. Hasse s.n. [Los Angeles, September 1887] (N, Pa, W—71922); D. Haynes s.n. [Pasadena, June 1893] (Po—4015); Hilend s.n. [Topanga Canyon, May 19, 1933] (Bt—20500); I. M. Johnston 1320 (Du—109078, Mi, Po—4011, W—1103173); MacFadden 92e (Ca—450803, Ob—50822); McClatchie s.n. [Pasadena, 9/11/1892] (N); Steele & Pratt s.n. [May 4, '33] (Ob—69478); ?L. C. Wheeler 666 (Po—214392, Rs—9719). Mariposa Co.: L. J. Fox s.n. [Yosemite Valley] (I). Mendocino Co.: Chesnut 1 (W—430451); Rattan s.n. [June 1882] (Du—19182); L. S. Rose 39140 (Ca—882662, Ew, Ky, N, W—1897881, We). Monterey Co.: Abrams 5627 (Du—65604); Chisaki, Sharsmith, & Solbrig 2823 (Ca—177949, W—2301140); H. Davis 112 (Po—126526); W. R. Dudley s.n. [June 24, 1905] (Du—17455); H. P. Chandler 404 (Ca—25156); Elmer 4045 (Ca—184382, Du—142144, Po—128528); C. A. Graham 199 [U. S. Dept. Agr. Forest Serv. 22416] (Ca—124413); Hartweg 1924 (N); A. A. Heller 6778 (Ca—58422, Du—24203, Du—75576, Du—75587, N, Po—64519, W—467197); J. T. Howell 11562 (Gg—212574, Po—204175), 11575 (Gg—212573, Mn—20852), 11578 (Gg—212582, S, Um—18), 11580 (Gg—212358), 39561 (Z), 39595a (B), 40095 (B); Knoche 234 (Du); Mallory s.n. [May 4, 1920] (Du—110895); Michener & Bioletti s.n. [Moss Beach, July 1891] (Se—95720); Ottley 1276 (Ws); Parry s.n. [Monterey, 1850] (N); R. A. Plaskett 142 (N, W—341448); L. S. Rose 33338 (Vt), 53042 (B, Go, Go); L. C. Wheeler 4294 (Ca—604725); Willey s.n. [Monterey, 1849—1850] (Dt); Youngberg 228 (Ca—597704, Po—231142), s.n. [July 1938] (Po—258837, Ua—39522). Orange Co.: Booth 1171 (Ca, Po—201796); W. H. Brewer 717 (W—322401); E. H. Campbell 91 (Gg—31338); D. L. Crawford s.n. [near Laguna, July 1916] (Po—4010); F. R. Fosberg S.935 (Up); Munz 6734 (Po—18203); Munz, Street, & Williams 2686 (Du—107318, Po—6327). Riverside Co.: J. T. Howell 1040 (Rs—652). San Benito Co.: W. H. Brewer 717 (Ca—25160); ?J. T. Howell 11548 (La); Pieters s.n. [June 1, 1910] (Mi). San Bernardino Co.: I. M. Johnston 1407 (Ca—205358), 1608 (Ca—205359, Ca—212188, Du—83815, Po—4012); Lhan & Illingworth 30 (Du—143859); Munz 12313 (N); S. B. Parish 4606 (Du—91159), 9479 (Vi), s.n. [Sept. 1900] (Du—143858); E. L. Peterson 831 (En); F. M. Reed 7990 (Bt—15802). San Diego Co.: Alderson s.n. [June '94] (Mi); H. P. Chandler 5378 (N); F. R. Fosberg S.911 (Up), S.926 (Up); Gander 167.24 (Sd—11037), 2075 (Sd—15496), 2161 (Sd—15583), 6142 (Sd—21938), 6195 (Sd—22058), 8447 (Sd—27110); Herb. Cleveland s.n. [San Diego, June 1875] (Sd—6792), s.n. [Mussel Beds, May 13, 1885] (Sd—6790); E. R. Johnson 1308 (Rs—1487); E. B. Kurtz s.n. [August 1937] (Up);

Mills s.n. (Ur--22835); Orcutt s.n. [Cuyamaca Mts., Sept. 1882] (Sd--6779, Sd--6787), s.n. [1890] (Mi); Edw. Palmer 184 (Sd--6780); Snyder s.n. [La Jolla, May 1897] (Sd--4252); M. E. Spencer 994 (N, Ob--50842, Po--47698), s.n. [10/10/1918] (Ob--50825); Stokes s.n. [Smith Mt., Aug. 1898] (Sd--13470); Stover s.n. [Point Loma, May 4, 1938] (Sd--21028); L. F. Street s.n. [May 12, '17] (Du--107329); Wiggins 2614 (Au--194526, Ca--1612, Ca--1654, Du--366023), 2967 (Ca--1655, Ca--429803, Ca--473771, Du--182564, Du--366045); Wood & Negley s.n. [Palomar Mt., Sept. 20, 1936] (Sd--16405). San Luis Obispo Co.: L. D. Benson 7998 (Po--267639); O. Degener 4685 (Ms, N); F. H. Elmore 349 (Ak--10958); R. S. Ferris 9770a (Du--269819); Ferris & Rossbach 9434 (Ca--604940, Du--256484); F. R. Fosberg S. 4981 (N); Gander 7534 (Sd--25195); J. McDonald s.n. [July 19, 1925] (Gg--129483); Nobs & Smith 826 (Ca--191997, N), 868, in part (Ca--191998); Nordstrom 1132 [U. S. Dept. Agr. Forest Serv. 19848] (Ca--124407); Steele & Pratt s.n. [June 2, 1933] (Ob--50823); Mrs. R. W. Summers s.n. [June 19, 1887] (Po--64653); Winblad s.n. [June 17, 1937] (Gg--253028). San Mateo Co.: Blasdale s.n. [Pilarcitos, June 23, 1893] (Ca--450179); W. R. Dudley s.n. [June 18, 1905] (Du--278634); L. S. Rose 32321 (Al, Ms, Se--41594); Walther s.n. [Woodside, June 9, 1919] (Gg--31346), s.n. [Woodside, May 5, 1920] (Gg--31362); Wiggins 3782 (I, La); C. B. Wolf 607 (I, Rs--18513). Santa Barbara Co.: R. S. Beal Jr. s.n. [Santa Barbara, 13 May 1948] (Ca--942561); Bingham 155 (Ka); Demaree 18103 (Du--297049, Io--152354, Ok); Eastwood 401 (Gg--31358), 818 (Gg--31364), s.n. [Santa Barbara, July 29, 1917] (Gg--31340); J. L. Fox s.n. [June and July 1930] (I); Kincaid s.n. [Santa Barbara, July 5, 1935] (Se--34654, Se--34655); Munz 9295 (Po--98527); G. Newell s.n. [San Isidro, Aug. 1913] (Gg--31356); S. B. Parish 11061 (Du--81183); Suksdorf 179 (Pl--138406), 179b (Pl--138405). Santa Clara Co.: Abrams s.n. [Stanford University, April 1898] (Po--87969); W. A. Atkinson s.n. [April 1900] (Du--24216); H. A. Barker 608 (Rs--10374); Collector undesignated 196 (Po--126476); H. A. Davis s.n. [near Lagunita] (Se--46752); Demaree 9205 (Io--147325); W. R. Dudley s.n. [June 1899] (Du--278632), s.n. [June 3, 1900] (Du--278631); H. T. Edwards s.n. [June '77] (N); Hewatt 162 (Au, Nt); Ingels s.n. [Lathrop Hills, Apr. 17, 1908] (Dp); J. D. Randall 422 (Du--63390, Du--63391); W. H. Rich s.n. [June 8, 1912] (Du--98022); R. J. Smith s.n. [July 1906] (Du--77584); H. S. Yates 5528 [U. S. Dept. Agr. Forest Serv. 14953] (Ca--124416). Santa Cruz Co.: Akey 154 [U. S. Dept. Agr. Forest Serv. 11685] (Ca--124404); N. K. Carlson 44 [U. S. Dept. Agr. Forest Serv. 11692] (Ca--124403); H. Davis s.n. [Glenwood, Sept. 1907] (Du--278635); O. Degener 4482 (Ms, N); M. Epling 8310 (La, Or--20188, Or--

20235); M. E. Jones 2215 (Bm, Br, Go, Po--71013); H. L. Mason 3365a (Ca--635116); Pringle s.n. [Aptos, 11 July 1882] (Vt); M. Randall s.n. [5.VII.30] (Ca--495557); E. E. Stanford 488 (Or--20802). Shasta Co.: Nutting s.n. [May 22] (Po--126475). Siskiyou Co.: Edw. Palmer 2529a (W--277855); ?L. C. Wheeler 3315 (St--9255). Sonoma Co.: H. Edwards s.n. [May 1877] (Lu). Tulare Co.: Culbertson 4210, in part (Po--63887); Steele & Pratt s.n. [July 20, 1933] (Ob--70165). Ventura Co.: Abrams & McGregor 5 (Du--24204, N, W--612946); W. H. Brewer 229 (W--322400); Dudley & Lamb 4808 (Ca--463187, Du--9558); Farr s.n. [Ventura, April 9, 1911] (Up--52603); J. P. Harrington s.n. [April 1955] (W--2176802); M. E. Jones s.n. [April 27, 1926] (Po); Kendall s.n. [Ventura, 4-13-23] (Po--17416); Larson 101 (La); Munz 13151 (Po--213656); Ogden s.n. [Ventura, July & Aug. 1892] (Cm); S. F. Peckham s.n. [Ojai, May 15, 1866] (W--344347); H. M. Pollard s.n. [Oak View, Oct. 8, 1944] (Gg--330306); Purer 6703 (Du--271812), 6755 (Bt--29702); Thacher 40 (Ca); Wood & Jones s.n. (La). County undetermined: A. Fitch s.n. (T); Herb. State Survey 717 (Ca--25161); Jepson 21226 [between Sims & Sisson] (Ca). CHANNEL ISLANDS: San Clemente: Munz 6734 (Ca--28475); Murbarger 218 (Ca--557827); Trask 7 (W--444682). MEXICO: Baja California: Fish s.n. [Orcutt s.n., 4-16-1885] (Mn--11968). CULTIVATED: Belgium: Lejeune s.n. (Br); M. Martens s.n. [cult. h. Leod.] (Br). France: Collector undesignated s.n. (Sg--16091); W. H. Harvey s.n. [h. R. P., julio 1843] (Du--166446). Germany: Herb. Martius s.n. [hort. Monac., Aug. 1833] (Br). Maryland: McCann s.n. [9-15-36] (Md). Spain: Herb. Hort. Matrit. 45 (Q). LOCALITY OF COLLECTION UNDETERMINED: Collector undesignated 1558 (Sg--16114); Herb. Vahl s.n. (S).

VERBENA LASIOSTACHYS f. ALBIFLORA Moldenke, Phytologia 2: 329, nom. nud. (1947), f. nov.

Haec forma a forma typica speciei corollis albis recedit.

Bibliography: Moldenke, Phytologia 2: 329. 1947; Moldenke, Castanea 13: 113. 1948; Moldenke, Alph. List Cit. 4: 1155, 1226, & 1252. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 27 & 198; Moldenke, Résumé 33 & 472. 1959.

This form differs from the typical form of the species in having white corollas.

The type of the form was collected by Le Roy Abrams (no. 5109) in Portola Valley, San Mateo County, California, on June 2, 1914, and is deposited in the Dudley Herbarium at Stanford University. It has been collected in flower and fruit in June. In all, 4 herbarium specimens, including the type, and 3 mounted photographs have been examined.

Citations: CALIFORNIA: San Mateo Co.: Abrams 5109 (Du--72837--type, F--photo of type, N--photo of type, Z--photo of type). Santa Barbara Co.: Eastwood 579 (Gg--31343). Tuolumne Co.: A. L. Grant

s.n. [Grant Ranch, near Columbia, June 11, 1915] (Po). County undetermined: M. L. Kendall s.n. [4-13-23] (Po--17416).

VERBENA LASIOSTACHYS var. SCABRIDA Moldenke, Am. Midl. Nat. 24: 753. 1940.

Synonymy: Verbena lasiostachys scabrida M. S. Baker, Part. List Seed Pl. North Bay 33. 1945.

Bibliography: Perry, Ann. Mo. Bot. Gard. 20: 291. 1933; Moldenke, Am. Midl. Nat. 24: 753. 1940; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 15, 80, & 101. 1942; Moldenke, Known Geogr. Distrib. Verbenac. Suppl. 1: 2. 1943; Jepson, Fl. Calif. 3 (2): 381--382. 1943; M. S. Baker, Part. List Seed Pl. North Bay 33. 1945; Moldenke, Alph. List Cit. 1: 3 & 25. 1946; Moldenke, Phytologia 2: 329, 330, & 383. 1947; Moldenke, Castanea 13: 113. 1948; Moldenke, Alph. List Cit. 2: 467, 473, 474, 479, 482, 483, 570, & 609 (1948), 3: 720, 732, 770, 794, 871, 912, & 976 (1949), and 4: 1099, 1119, 1127, 1138, 1172, 1193, 1225, 1226, 1232, 1244, 1245, & 1652. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 27 & 198. 1949; Moldenke, Résumé 32, 33, 368, & 472. 1959; Moldenke, Phytologia 8: 144. 1961; Moldenke, Résumé Suppl. 3: 8. 1962.

This variety differs from the typical form of the species in having the mature leaves decidedly scabridous on the upper surface.

The type of the variety was collected by Samuel Bonsall Parish (no. 11590) in a dry meadow at Monterey, Monterey County, California, in August, 1917, and is deposited in the herbarium of Pomona College at Claremont. The plants so designated may actually prove to be a hybrid with V. robusta Greene, which they closely resemble. The plants often have their bractlets as long as the calyx (cfr. C. V. Meyer 240 at the University of California), as in that species, not shorter as in typical V. lasiostachys; yet Bradshaw 68, Hoover 3812, C. V. Meyer 240, and L. C. Wheeler 3315, with their open elongated spikes, are surely not conspecific with V. robusta.

The variety has been collected on dry sunny flats and dry mesas, in sloughs and dry meadows, on damp banks and stream banks, along rivers and wet roads, and on damp sunny south slopes, at altitudes of 8 to 3500 feet, in flower and fruit from May to October. Herbarium material has been misidentified and distributed under the names V. lasiostachys Link, V. prostrata R. Br., and V. robusta Greene. Material of L. C. Wheeler 3315, Wiggins 8957, and C. B. Wolf 2252 has been cited by me herein also under V. lasiostachys and its var. septentrionalis and should be re-examined; it will probably all prove to be var. scabrida. Perry (1933) cites specimens of G. T. Butler 1621 in the Missouri Botanical Garden and United States National herbaria as typical V. lasiostachys.

In all, 53 herbarium specimens, including the type of both names involved, and 2 mounted photographs have been examined by me.

Citations: OREGON: Curry Co.: Kildale 6055 (Du). Jackson Co.: C. B. Wolf 963 (Du--159333). CALIFORNIA: Alameda Co.: Wiggins

8957 (Du--266760, Gg--310868, Rs--23159, Se--52144). Colusa Co.: R. Stinchfield 375 (Du--73690, N, Po--63857). Fresno Co.: J. T. Howell 34053 (Z), 34090 (Gg); J. McDonald s.n. [Big Sandy Creek, June 1915] (Gg--31342, W--1089985). Lake Co.: M. S. Baker 8677 (N); Bradshaw 68 [U. S. Dept. Agr. Forest Serv. 20535] (Ca--124401); R. F. Hoover 3812 (Ca--766869, N, N); Schulthess s.n. [July 3, 1931] (Du--274040). Los Angeles Co.: Abrams 2481 (Du--24214, N, Po--156337). Monterey Co.: J. T. Howell 6539 (Gg--207494); S. B. Parish 11590 (Ca--205362--isotype, N--photo of type, Po--63863--type, Z--photo of type); L. W. Reinecke s.n. [September 5, 1937] (Ca--770047); L. C. Wheeler 4294 (Po--222439). San Benito Co.: J. T. Howell 11548 (Gg--212567, N). San Diego Co.: C. V. Meyer 240 (Ca, Ca--488893); C. B. Wolf 2252 (Ba, Du--207790, Gg--173929, Rs--9996). San Mateo Co.: Barry 215 (Du--279302). Santa Clara Co.: Newell s.n. [Los Gatos, June 18, 1914] (Gg--31353); Rotter 17 (W--308427). Santa Cruz Co.: J. T. Howell 11615 (Gg--212563, Rs--8477); H. A. Walker 730 (Po--126474). Siskiyou Co.: G. D. Butler 1621 (Du--24207, Po--69590); Eastwood 2102 (Gg--31357); Kildale 9194 (Du); L. S. Rose 45098 (Gg--329475, Go); L. C. Wheeler 3315 (Ca--882795, Gg--233041, Po--211271, Rs--13898). Tuolumne Co.: Mrs. W. J. Williamson 189 (Ca--882797). Ventura Co.: J. T. Howell 1028 (Rs--653).

VERBENA LASIOSTACHYS var. SEPTENTRIONALIS Moldenke, Am. Midl. Nat. 24: 753. 1940.

Synonymy: Verbena lasiostachys septentrionalis M. S. Baker, Part. List Seed Pl. North Bay 33. 1945. Verbena nevadensis Kearney ex Moldenke, Résumé 370, in syn. 1959. Verbena prostrata Benth. ex Moldenke, Résumé 372, in syn. 1959 [not V. prostrata Ait., 1947, nor R. Br., 1812, nor G. Savi, 1802].

Bibliography: Jepson, Erythrea 1: 12. 1893; Perry, Ann. Mo. Bot. Gard. 20: 291. 1933; Moldenke, Am. Midl. Nat. 24: 753. 1940; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 15, 80, & 101. 1942; Jepson, Fl. Calif. 3 (2): 381--382. 1943; Moldenke, Known Geogr. Distrib. Verbenac. Suppl. 1: 2. 1943; Moldenke, Castanea 10: 40. 1945; Moldenke, Am. Journ. Bot. 32: 610. 1945; M. S. Baker, Part. List Seed Pl. North Bay 33. 1945; Moldenke, Alph. List Cit. 1: 25, 81, 82, 108, 109, 122, 153, 193, 243, 255, 265, & 285. 1946; Moldenke, Phytologia 2: 330 (1947) and 2: 478. 1948; Moldenke, Castanea 13: 113. 1948; Moldenke, Alph. List Cit. 2: 438, 454--457, 470, 473, 478, 480, 483, 488, 492, 493, 519, 525--527, 571, 577, 584, 595, 597, 601, 606, 609, 634, & 644 (1948), 3: 720--722, 769, 770, 783, 788, 794, 801, 803, 828, 841, 843, 870, 871, 948, 972, 976, & 977 (1949), and 4: 981, 995, 1002, 1003, 1118, 1119, 1127, 1137, 1138, 1155, 1166, 1173, 1174, 1177, 1198, 1199, 1211, 1215, 1216, 1222--1230, 1232, 1236, 1238--1242, 1244--1248, 1252, 1253, 1259, 1261, 1288, & 1289.

1949; H. N. & A. L. Moldenke, Anal. Inst. Biol. Mex. 20: 14. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 27 & 198. 1949; Moldenke, Am. Midl. Nat. 59: 342 & 361. 1958; Moldenke, Résumé 32, 33, 368, 370, 372, 421, & 472; Moldenke, Résumé Suppl. 2: 10 & 12. 1960; Moldenke, Phytologia 8: 120, 121, & 144 (1961) and 8: 206, 267, 279, 280, 396, & 407. 1962; Moldenke, Résumé Suppl. 3: 8 (1962) and 6: 3. 1963; Moldenke, Phytologia 8: 487 (1963), 9: 215 (1963), and 9: 404. 1963.

This variety differs from the typical form of the species in having its calyx in all only 3—4 mm. long. It is said to be a decumbent perennial or nearly erect herbaceous perennial, 8 inches to 3 feet tall, often growing in clumps. The flowers are described as blue or purple. The cocci are dorsally 3- or 4-striate and slightly reticulate, the commissural faces minutely dotted.

The type of the variety was collected by Carl Clawson Epling (no. 5445) near Medford, Jackson County, Oregon, in August, 1922, and is deposited in the herbarium of the University of California at Los Angeles. The type of *V. nevadensis* is Kennedy & Doten 241 from Nevada County, California, deposited in the herbarium of the California Academy of Sciences at San Francisco. A note appended to Baker 7904 states that it "does not seem to fit any sp. in manual".

The variety has been found on moist banks and bottomlands, in winter stream beds and valley flats, on damp sunny south slopes and moist creek bottoms, in semi-shade of river bottoms, in open places in redwood forests, in old rock quarries and woods, in 2—3 inches of water on muddy shores of lakes, in wet soil and partial shade, on dry open hills and dry banks along railroads, on streambanks and sandbars, in dry or wet ground of stream margins, sandy dry flood beds, waste ground, gravel bars, damp banks, along roadsides and around springs, on dry mesas and dry sunny flats, in grassy moist woods and moist ground, in grassy areas of mixed chaparral and Quercus agrifolia woodland, on hills and sandy dry riverbanks, on slopes in chaparral, in dry open ground, growing in fine soil, loam, decomposed granite, or gravelly clay-loam porphry, at altitudes of 150 to 7000 feet, flowering and fruiting from April to October and in December. It is said sometimes to grow in clumps 2 feet tall. Short & Johnson report it as "locally frequent in open woods in woodland-grass association with Bromus rubens, B. mollis, and Quercus douglasii", while Tracy says that he found it to be "in open ground much more common [Mendocino County] than farther northward". Cooke describes it as "common around springs" in Siskiyou County; Benson found it in the Transition and Upper Sonoran Zones; Blankinship describes it as an "introduced roadside weed"; while Ingram notes "not observed to be grazed, with timothy, redtop, velvet grass, Kentucky bluegrass as a weed in dry meadows." Munz found it "infrequent near small streams in Yellow Pine Forest" and "scattered in sun on seepy hillside in yellow pine association." Gorman asserts that it is common along roadsides and waste places in Jackson County,

Oregon, while Ewan found it in dry grassy clearings in Baccharetum with Navarretia and Gnaphalium, and frequent in moist soil of backwater channels. Tracy refers to it as "scattered" in Humboldt County, while Dennis found it on "dry open ground with Hypericum perforatum and Aira caryophyllea."

Common names recorded for the plant are "common vervain", "verbena", "vervain", and "wild verbena".

Herbarium material of this variety has been misidentified and distributed under the names V. bracteosa Michx., V. canescens H.B.K., V. hastata L., V. lasiostachya Link, V. lasiostachys Hook. & Arn., V. lasiostachys Link, V. menthaefolia Benth., V. prostrata R. Br., V. robusta Greene, and "Labiatae".

It should be noted here that K. Brandege s.n. [Jolon, June 19, 1908], Culberson H.210, and Wilkes 1661 are mixtures with V. abramsi Moldenke, while G. R. Vasey s.n. [California, 1875] is a mixture with something non-verbenaceous. The Brandege specimens are very perplexing -- their similarity may indicate hybridity. Butler 1621 is described by the collector as "erect or decumbent, never prostrate" and is probably var. scabrida; re-examination of Wheeler 3315 will probably also show that this collection is var. scabrida. On the other hand, the L. C. Wheeler 666 material cited under typical V. lasiostachys will probably prove to be var. septentrionalis.

The Davy & Blasdale 5892 collection cited below may not actually have come from Mendocino County. Its label merely states "Mendocino, Humboldt, and Del Norte Counties" with no specific locality designated.

Perry (1933), under V. prostrata R. Br., cites 16 additional specimens not as yet seen by me: OREGON: Douglas Co.: J. C. Nelson 2669 (G); J. W. Thompson 4412 (E). Jackson Co.: C. Epling 5445 (E--isotype). Josephine Co.: J. T. Howell s.n. [Grant's Pass, July 3rd, 1887] (F). County undetermined: Hammond 322 (E, W). CALIFORNIA: Amador Co.: G. Hanson 964 (E). Los Angeles Co.: W. H. Brewer 31 (G). San Diego Co.: Abrams 3787 (E, F, G, N). Santa Barbara Co.: Elmer 3846 (E). Sonoma Co.: A. A. Heller 5785 (E, F, G).

In all, 279 herbarium specimens, including the types of all the names involved, and 2 mounted photographs have been examined by me.

Citations: OREGON: Curry Co.: W. H. Baker 4207 (Ca--773283, Gg--35345); Priebe s.n. [August 15, 1937] (Or--35741). Douglas Co.: J. C. Nelson 2669 (Pl--103659); M. E. Peck 20215a (Gg--302834); J. W. Thompson 4412 (Du--179613); L. F. Ward 104 (W--404609). Jackson Co.: Dennis & Dennis 2255 (Hi--204053); C. Epling 5445 (La--type, N--photo of type, Z--photo of type); Gorman 4151 (Du--88971, Mn--16974, Pl--103658); E. W. Hammond 322 (W--333831); J. W. Thompson 12409 (Se--15934). Josephine Co.: Applegate 8703 (Du--248339), 11264 (Du--287874, Du--289387); W. W. Canby 71 (Or--

8868); H. L. Dale s.n. [July 4--16, 1919] (Du--99667); L. F. Henderson 796 (Or--8869); J. T. Howell 174 (W--1323119), 272 (Or--8870), s.n. [Grant's Pass, June 24th, 1884] (Bc, Du--91136, Pa, Se--21482), s.n. [Grant's Pass, July 3rd, 1887] (Br, Ca--104846, Up--17120); T. Howell 1249 (Ka); Ingram 1197 (Or--23904); Kildale 6314 (Du), 8943 (Du); Overlander s.n. [July 24, 1940] (Or--52623); C. V. Piper 6160 (W--527761). Klamath Co.: Gilkey s.n. [6/24/27] (Or--21633); Ingram 1759 (Or--23905). Linn Co.: Rone 202 (Du--24206). County undetermined: Hammond 322 [Pleasant Valley near Winner] (N); J. T. Howell s.n. [Woodville, May 18, 1890] (Pl--105635); J. O. Stewart 71 (Or--16623). CALIFORNIA: Alameda Co.: Carruth s.n. [E. Oakland Hills, July 1901] (Gg--31359); L. Constance 448 (Ca--521623); Drew s.n. [Oakland, June 25, 1889] (Ca--76170); Michener & Bioletti s.n. [Oakland, June 1891] (W--517995); C. O. Smith s.n. [vicinity of Berkeley, June 4/06] (Lu); C. V. Smith s.n. [Berkeley, June 4, 1906] (Ca--129463). Amador Co.: G. Hansen 964 (Du--24215). Butte Co.: R. M. Austin 299 (W--285211). Calaveras Co.: Eggleston 9724 (W--881267); G. Hansen 1823 (W--338406). Colusa Co.: M. S. Baker 10138 (N). Contra Costa Co.: Ewan 9719 (En, Hp, Rs--29666, Se--52532). Del Norte Co.: E. A. McGregor s.n. [Aug. 8, 1921] (Du--137789). Fresno Co.: M. K. Clemens s.n. [Wood's Creek, July 19, 1910] (Po--69912); W. B. Duncan 164 (Du--130877); J. McDonald s.n. [Big Sandy Valley, June 1, 1932] (Gg--195255). Glenn Co.: M. S. Baker 10022 (N); J. T. Howell 19170 (Gg--312336); R. E. Nelson 159 (Ca--1178). Humboldt Co.: L. D. Benson 488 (Po--267637); H. P. Chandler 1353 (Ca--154273); Chesnut & Drew s.n. [Hy-Am-Pum, July 21, 1888] (Ca--35085); L. Constance 660 (Pl--59990); De Cou s.n. [6.11.99] (Up); C. D. Duncan s.n. [Sept. 22, 1920] (Du--125376); Kildale 2158 (Du--161281); C. C. Marshall s.n. [1888] (Ca--25158); J. P. Tracy 2775 (Ca--154022, Hi--210193), 12632 (Ca--585977, Du--260088), 12965 (Ca--585990). Kern Co.: L. D. Benson 3640 (Du--218707, Po--267643, Se--21505); Coville & Funston 1110 (W--71921); Nobs & Smith 472 (Ca--191996); Short & Johnson S.244 [U. S. Dept. Agr. Forest Serv. 21037] (Ca--137387); Weston 156 (Gg--139553, Gg--139575), 685 (Gg--145960). Lake Co.: L. D. Benson 571 (Po--267638); Bentley s.n. [May 28, 1917] (Du--85487); Blankinship s.n. [Kelseyville, June 12, 1924] (Gg--165153); Bolander 2683 (W--322398); Cleveland s.n. [Allen Springs, June 1882] (Sd--6785); A. A. Heller 5919 (Du--24212, Du--75582, W--417297); Herb. Cleveland s.n. [Hough Springs, June 13, 1882] (Sd--6789); J. T. Howell 21066 (Gg--327756); Jepson 18935 (Ca), 21227 (Ca); Jussel 323 (Gg--213274); Leithold s.n. [July 1893] (Du--9553); Munz 22302

(Gg--418633); P. O. Schallert 356, in part (Hi--30439); Schulthess s.n. [Kelseyville, July 3, 1931] (Ca--635118); A. S. Stinchfield s.n. [near Bartlett Springs, August 1916] (Du--76555, Gg--31336, Po--63859); J. Torrey 417 (T). Los Angeles Co.: Abrams 1487 (Du--24209); J. H. Barber 35 (Ca--25168); Braunton 100 (W--465105), 378 (W--465366); W. H. Brewer 31 (W--322399); Eastwood 96 (Gg--31365); Epling & Epling s.n. [Palmdale, May 1925] (Or--30299, Or--30348); Ewan 5504 (En), 8401 (Ca--586863), 10821 (En, Ms, Rs--29315, Se--52230); G. B. Grant 4119 (Du--75584); Nevin s.n. [Wilson's Lake, 1904] (Du--77579); S. B. Parish 1983 (Du--91135); Pupils of L. A. High School s.n. [near "The Palms", May 1901] (Ca--76171), s.n. [May 1902] (Ca--76169); M. Reed s.n. [Pomona, 8/17/1895] (Ka); L. C. Wheeler 666 (Du--234656, En). Mendocino Co.: O. M. Clark 5286 (B); Davy & Blasdale 5892 (Ca--154272, W--668959); C. D. Duncan 98 (Du); Eastwood 12692 (Gg--138948), 15187 (Gg--158669); A. Hastings s.n. [May 19, 1940] (Ro); Jepson 7643 (Ca); Jussel 1 (Gg--195432), s.n. [May 1, 1931] (Mn--20896); McMurphy 320 (N, W--610874), 820 (Du--24201); L. S. Rose 34261 (Gg--237858, Hp, I, S); Stahelin s.n. [U. S. Dept. Agr. Forest Serv. 19562] (Ca--124406); J. P. Tracy 5059 (Ca--203966); H. A. Walker 211 (Ca--112748); Winblad s.n. [June 22, 1941] (Gg--310867); C. B. Wolf 1268 (Du--166027); H. S. Yates 3577 [U. S. Dept. Agr. Forest Serv. 1732] (Ca--124417). Monterey Co.: E. K. Abbott s.n. [Monterey] (Gg--31350); Antisell 187 (Du--177389, T); M. S. Baker 7904 (Ro); K. Brandeggee s.n. [Jolon, June 19, 1908], in part (Ca--112914), s.n. [Foot of Jolon Grade, June 7, 1909] (Ca--450183); Dudley s.n. [May 1937] (Se--69269); Hartweg 1924/418 (Lu); Holman s.n. [Santa Barbara Forest, May 24, 1933] (Ca--505133); J. T. Howell 40045 (Z); Morrow, Cook, & Cook 64 (Ca--916545); Munz 20892 (Gg--418632); Patterson & Wiltz s.n. [June 28, 1907] (Du--24208, Rs--6562); R. A. Plaskett 98 (Ca--104850); A. D. Randall 356 (Du--13316, Po--127827); Raven 8796 (Gg--408163); P. O. Schallert 356, in part (Hi--30363). Nevada Co.: Doten 241 (Ca--66442); M. E. Jones 2598 (B, Go, Po--70672); Kennedy & Doten 241 (Gg--31334, N); H. M. Pollard s.n. [July 1936] (Gg--347558). Plumas Co.: Sutcliffe s.n. [Gold Valley, Sept. 1920] (Gg--31361). San Benito Co.: Eastwood 6971 (Gg--31349); V. F. Hesse 2606 (Ca--170318); Lathrop s.n. [June 7, 1903] (Du--86021); Raven 2171a (N). San Bernardino Co.: H. M. Hall 1475 (Ca--64386); Raven & Wedberg 11221 (Gg--409380). San Diego Co.: Abrams 3787 (Du--24202, Po--156120); Alderson 8464 (Ca--104848), s.n. [Witch Creek, 1893] (Ca--25166), s.n. [Witch Creek, June 1921] (Ca--25155); T. S. Brandeggee s.n. [Julian, June 18, 1894] (Ca--104844); Collins & Kempton 164 (W--882212); M. E.

Jones s.n. [Palomar Mt., July 27, 1926] (Po--122652); S. G. Stokes s.n. [June 1895] (Du--24200). San Luis Obispo Co.: J. H. Barber s.n. [Paso Robles, April 23, 1899] (Ca--57554); Eastwood 13617 (Gg--139973); T. M. Hendrix 269 [U. S. Dept. Agr. Forest Serv. 20462] (Ca--124412), 1043 [U. S. Dept. Agr. Forest Serv. 25146] (Ca--124414); Herb. Calif. Polytech. School s.n. [Poly Canon, May 14, 1905] (Ca--456153); H. C. Lee 972 (Ca--124408); Nobs & Smith 868, in part (Gg--417907); Edw. Palmer 342 (Ca--177630); L. A. Summers s.n. [March 1884] (Au--175731); Mrs. R. W. Summers s.n. [June 13, 1887] (Ca--52303); Twisselmann 2164 (Gg--399250). San Mateo Co.: K. Brandeggee s.n. [Moss Beach, July 26, 1908] (Ca--185366). Santa Barbara Co.: M. S. Baker 14 (Ca--450177); Mrs. E. Cooper s.n. [Sa. Barbara, June 1879] (W--147586); G. W. Dunn 566 (W--1323120); Eastwood 166 (W--610050), 13688 (Gg--139682); Elmer 3846 (Du--24211, Po--49421, Vt, W--466049); W. A. Peterson 307 [U. S. Dept. Agr. Forest Serv. 16449] (Ca--124409); H. M. Pollard s.n. [Aug. 30, 1957] (Gg--416659); Rothrock s.n. [Santa Barbara, June 1875] (W--71920). San Francisco Co.: A. Kellogg s.n. [near San Francisco, 1866] (W--322403). Santa Clara Co.: Belshaw 2204 [U. S. Dept. Agr. Forest Serv. 16106] (Ca--124402); L. D. Benson 167 (Po--267636); W. R. Dudley s.n. [June 10, 1897] (Du--278633); H. K. Sharsmith 1139 (Ca--724394), 3187 (Ca--724513). Santa Cruz Co.: Akey 50 [U. S. Dept. Agr. Forest Serv. 11651] (Ca--124411); Ewan 9062 (En). Shasta Co.: M. S. Baker s.n. [Morley's Station, May 22] (Ca--450178); Baker & Nutting s.n. [Morley's Station, May 22, 1894] (Ca--25191, W--239798); Drew s.n. [June 1916] (Du--69497); Eastwood & Howell 7886 (Gg--277933); Johannsen 46 [U. S. Dept. Agr. Forest Serv. 2535] (Ca--124405). Sierra Co.: E. D. Cantelow 4526 (Gg--348277). Siskiyou Co.: D. Barbe 17 (Ca--37353); G. D. Butler 83 (Ca), 1621 (Ca--164109, W--669470); W. B. Cooke 15149 (Ca--45318, Du--277308, N, Or--42076); L. E. Smith s.n. [Yreka, Aug. 1912] (Gg--31355); ?L. C. Wheeler 3315 (La); C. B. Wolf 1047 (Du--159106, Rs--15799). Sonoma Co.: Carruth s.n. [Russian River, July 1800] (Gg--31360); A. A. Heller 5785 (Du--24199, Du--75583, N, Po--64648, W--416795); Jepson 9486 (Ca); Rattan s.n. [May 17, 1877] (Du--19183), s.n. [Guerneville, June 17, 1877] (Gg--414251). Tehama Co.: Munz 16963 (Gg--376351, N). Trinity Co.: Mrs. H. C. Cantelow 1728 (Gg--348276); Kildale 10931 (Du--215685). Tulare Co.: M. Bebb 373 (Ok); Culberson H. 210, in part (Gg--31352); W. Fry 333 (Ca). Tuolumne Co.: A. L. Grant s.n. [Columbia, June 9, 1915] (Ca). Ventura Co.: Cobb 153 (Ca--450181); Evermann s.n. [Santa Paula, 1881] (W--617847); Gifford 197 [U. S. Dept. Agr. Forest Serv. 4525] (Ca--124415); Hubby s.n. [April 24, 1894] (Gg--345632); Simontacchi 74 [U. S.

Dept. Agr. Forest Serv. 13573] (Ca--124410); H. J. Thompson 2037 (Au); C. B. Wolf 2037 (Ca--527197, Du--231082, Rs--1755). County undetermined: Mrs. R. M. Austin s.n. (Ca--104847); Eastwood s.n. [Knight's Valley, May 8, 1900] (Ca--104852); Edw. Palmer 342 [Cent. Calif., 1876] (W--71926), s.n. [s.e. Calif., 1876] (Du--200648); G. R. Vasey s.n. [California, 1875] (W--71923); Wilkes 1661, in part [Lower Sacramento] (W--71925). LOCALITY OF COLLECTION UNDETERMINED: Herb. Coll. of Hawaii s.n. (Bi, Bi, Bi).

xVERBENA LECOCQI Moldenke, Phytologia 2: 148. 1946.

Synonymy: Verbena hispida x prostrata Dermen, Cytologia 7: 170. 1936. Verbena hispida Ruiz & Pav. x V. lasiostachys Link ex Moldenke, Résumé 366, in syn. 1959. Verbena lasiostachys Link x Verbena hispida Ruiz & Pav. ex Moldenke, Résumé 368, in syn. 1959.

Bibliography: Dermen, Cytologia 7: 170. 1936; Moldenke, Phytologia 2: 148. 1946; Moldenke, Alph. List Invalid Names Suppl. 1: 24 & 25. 1947; H. N. & A. L. Moldenke, Pl. Life 2: 68. 1948; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 164 & 198. 1949; Moldenke in Chittenden, Roy. Hort. Soc. Dict. Gard. 4: 2211. 1951; Moldenke, Am. Midl. Nat. 59: 354. 1958; Moldenke, Résumé 223, 366, 368, & 472. 1959; Moldenke, Phytologia 8: 121 (1961) and 9: 296. 1963.

This is the artificially produced hybrid between V. hispida Ruiz & Pav. and V. lasiostachys Link, produced in Massachusetts by Dermen in 1936. It is named in honor of Henri Lecocq, professor of natural history and director of the botanical garden of Clermont-Ferrand, author of a work on the phytogeography of Europe. Its characters are intermediate between those of the two parental species. These two parental species are not known to occur together in the wild state anywhere, so the hybrid is not to be expected in the natural state. In view of the lack of attractiveness exhibited by both "parents", the hybrid is not likely to have any horticultural merit.

VERBENA LILACINA Greene, Bull. Calif. Acad. 1 (4): 210. 1885.

Bibliography: Greene, Bull. Calif. Acad. 1 (4): 210. 1885; Hook. f. & Jacks., Ind. Kew. 2: 1179. 1895; Perry, Ann. Mo. Bot. Gard. 20: 249, 250, 312, 340--341, & 355. 1933; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 18 & 101. 1942; Moldenke, Castanea 13: 114. 1948; Moldenke, Alph. List Cit. 3: 712 & 787 (1949) and 4: 1165 & 1225. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 33, 34, & 198. 1949; Moldenke, Résumé 39, 40, & 472. 1959; Moldenke, Résumé Suppl. 3: 10. 1962.

Herb; stems erect, much branched, 0.5--1 m. tall, very sparsely hirsute throughout or glabrous except just below the spike; leaves decussate-opposite; leaf-blades 3--5 cm. long, contracted at the base into a margined petiole, bipinnatifid or the upper ones pinnatifid, with remote divisions and the ultimate lobes chiefly linear and acute, somewhat scabrous and strigillose on

both surfaces, rugose above; midrib prominent beneath; spikes fascicle-like, cymosely arranged, long-pedunculate, short, stout, dense; bractlets somewhat shorter than the calyx, lanceolate-setaceous, pubescent, ciliate-margined; calyx about 7 mm. long, appressed-pubescent, short-hirsute along the veins, the lobes unusually long, 2.5--3 mm. in length, attenuate at their apex into subulate-setaceous teeth; corolla lavender, its tube protruding very little beyond the calyx; corolla-limb about 10 mm. wide, the lobes emarginate; anthers not glandular; sterile style-lobe projecting well beyond the stigmatic surface; schizocarp deeply depressed at the apex; cocci almost smooth, slightly enlarged at the base, the commissural surface muricate-scabrous, not reaching the tip of the nutlet.

The type of this endemic species was collected by Edward Lee Greene on Cedros Island, on April 29, 1885, and is deposited in the Gray Herbarium of Harvard University. The species has been recorded by Perry and by myself from Baja California, but this was on the basis of the collections cited below from Cedros Island, since that island politically is part of Baja California, Mexico. The species is known only from Cedros, and has been collected in canyons and on arroyo floors at an altitude of 500 feet, in flower and fruit in March, April, and August. The Haines & Hale collection cited below is said to be a topotype. Anthony refers to the species as "common in canons."

Perry (1933) says "This is an anomalous species of uncertain relationship. It has an erect open habit with more or less glabrous stem and long internodes somewhat suggesting *V. neomexicana* (*Verbenaca*); nevertheless, the short stout dense spike does not point to an affinity with this section. Although the anthers are not glandular, the sterile style-lobe protrudes well beyond the stigmatic surface, and, in mature fruit, the style appears to have been inserted in a deep depression at the apex of the schizocarp; hence the species is regarded provisionally as a member of the section *Glandularia*." She cites 6 additional specimens not as yet seen by me: CEDROS ISLAND: A. W. Anthony 288 (E, F, G); Greene s.n. [29 April 1885] (G); Edw. Palmer 677 (F), s.n. [1889] (G).

In all, 25 herbarium specimens have been examined by me.

Citations: CEDROS ISLAND: A. W. Anthony 35 (Ca--124664), 78 (Du--24190), 288 (Du--24188, Me, W--313844); T. S. Brandegee s.n. [April 1, 1897] (Ca--104842); E. L. Greene s.n. [May 1, 1885] (Ca--104843); Haines & Hale s.n. [9 March 1939] (Ca--971567, Du--356562, Gg--384613, Ld, Rf, W--2130844); H. L. Mason s.n. [1925] (Gg--146931); R. V. Moran 3017 (Ca--15258); Edw. Palmer 677 (Br, C, Ca--124665, Gg--31370, Me, Pa, S, W--71980); J. N. Rose 16155 (N, W--638229).

VERBENA LILLOANA Moldenke, *Phytologia* 3: 176. 1949.

Bibliography: Moldenke, *Lilloa* 10: 346. 1944; Moldenke, *Phytologia* 3: 176 (1949) and 3: 290. 1950; E. J. Salisb., *Ind. Kew*.

Suppl. 11: 263. 1953; Moldenke, Résumé 127 & 472. 1959; Moldenke, Phytologia 8: 416 & 419. 1962; Moldenke, Résumé Suppl. 6: 7. 1963; Moldenke, Phytologia 9: 397. 1963.

Herb; stems slender, obtusely tetragonal, often canaliculate between the angles, minutely pilosulous or subglabrescent; nodes obscurely annulate with a band of denser hairs; principal internodes 6.5--7 cm. long; leaves decussate-opposite, usually with abbreviated branchlets in their axils; petioles slender, 1--2 cm. long, more or less margined, minutely pilosulous or glabrescent; leaf-blades submembranous, uniformly green on both surfaces, ovate in outline, 3--5 cm. long, 1.5--4 cm. wide, more or less tripartite, each division deeply incised-lobed, the larger lobes toothed near their apex, very minutely scattered-pilosulous on both surfaces or glabrescent; midrib and the 4 pairs of secondaries very slender, plane above, flattened beneath; veinlet reticulation very sparse and inconspicuous on both surfaces; inflorescence terminal, solitary; peduncles elongated, about 9 cm. long, minutely pilosulous with scattered short hairs or glabrescent; spikes dense-flowered except for the lowest 2 or 4 flowers which are widely separated (at least after anthesis); bractlets lanceolate, about 7 mm. long, long-attenuate at the apex, somewhat ciliate-margined, otherwise glabrate; calyx-tube about 7 mm. long, pilosulous-puberulent, surmounted by 5 unequal apiculate teeth about 2 mm. long; corolla blue or bluish to lilac, violet, or purple, its tube about 7 mm. long, obscurely appressed-pilosulous on the outer surface, the limb about 6 mm. in diameter, the larger lobes asymmetrically emarginate at the apex.

The type of this species was collected by Santiago Venturi (no. 4607) at Las Panas, at an altitude of 3000 meters, dept. Chicligasta, Tucumán, Argentina, on November 22, 1926, and is deposited in the Britton Herbarium at the New York Botanical Garden. The Monetti and Lillo collections cited below were reported in Lilloa 10: 346 (1944) as V. calliantha Briq. in error. Herbarium material has also been misidentified and distributed under the names V. cabreræ Moldenke, V. dissecta Willd., and V. erinoides Lam.

The species has been found in fields, meadows, and quebradas at altitudes of 1700 to 3000 meters, blooming in February, May, November, and December. In all, 14 herbarium specimens, including the type, have been examined by me.

Citations: ARGENTINA: Jujuy: Venturi 8356 (E--961971, N, W--1591404). Tucumán: Lillo 3989 [Herb. Inst. Miguel Lillo 31691] (N, Ug); Monetti s.n. [Herb. Inst. Miguel Lillo 31696] (N); O'Donnell 4290 (N); Venturi 2898 (Du--372501, W--1591271), 4063 (W--1591431), 4607 (Ca--342572--isotype, Gg--158084--isotype, N--type, W--1343319--isotype, W--1591443--isotype).

VERBENA LINDBERGI Moldenke, Phytologia 2: 322--323. 1947.

Bibliography: Moldenke, Phytologia 2: 322--323. 1947; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 94 & 198. 1949; Molden-

ke, Alph. List Cit. 3: 663, 750, & 846 (1949) and 4: 1124. 1949; E. J. Salisb., Ind. Kew. Suppl. 11: 263. 1953; Moldenke, Résumé 110 & 472. 1959; Moldenke, Phytologia 8: 463. 1963.

Herb; stems 1 m. or more tall, branched above, obtusely tetragonal, hispidulous with reflexed hairs about 1 mm. long, wearing off at the base of the stem in age; branches decussate-opposite, slender, ascending, tetragonal, sulcate in drying, hispidulous like the stems; nodes annulate; principal internodes 5.5--14 cm. long; leaves rather sparse, decussate-opposite, sessile or subsessile; petioles, when present, 1--2 mm. long, short-hispidulous; leaf-blades chartaceous, dark-green above, slightly lighter beneath, oblong-lanceolate, 2--4 cm. long, 6--11 mm. wide, acute at the apex, abruptly acute or subtruncate at the base, rather remotely serrulate along the margins, the points of the appressed teeth 4--5 mm. apart on mature leaves, strigillose-scabrous with whitish antrorse bulbous-based hairs above, rather sparsely short-hispidulous along the venation beneath; midrib indiscernible above, very inconspicuously prominulous beneath, very slender; secondaries very slender, about 3 per side, ascending, indiscernible above, very indistinctly prominulous beneath; vein and veinlet reticulation indiscernible above, obscure beneath; inflorescence spicate, terminating each lateral branch and in a panicle of about 6 branches at the apex of the stem; peduncles slender, tetragonal, sulcate in drying, hispidulous, 1--7.5 cm. long, those terminating the branches usually quite short; spikes rather few-flowered, densely conglobate when young, elongating to about 1.5 cm. in fruit and the lower fruits then imbricate but not especially densely so; bracts in the terminal panicle foliaceous, lanceolate, 0.5--2 cm. long, 1--5 mm. wide, attenuate to the sharp apex, short-hispidulous on both surfaces, sessile, in decussate-opposite pairs; bractlets lanceolate, about 2.5 mm. long and 1 mm. wide, sparsely puberulent, the margins often ciliolate, attenuate at the apex, about half as long as the fruiting-calyx; calyx tubular, 4--5 mm. long, short-toothed, spreading-puberulent with antrorse hairs; corolla-tube about 5 mm. long, its limb about 1.5 mm. wide.

The type of this species was collected by Gösta A. Lindberg (no. 136) -- in whose honor it is named -- in swamps at Ribeiro dos Buggris, in the neighborhood of Caldas, Minas Gerais, Brazil, on November 1, 1854, and is deposited in the herbarium of the Jardin Botanique de l'Etat at Brussels. It was originally identified as Keithia lavanduloides Benth. Specimens have also been misidentified and distributed as Verbena bonariensis L. The species apparently grows along shaded rivulets and in swampy places. All the known collections have been gathered in anthesis in November. The species is known only from Minas Gerais.

In all, 8 herbarium specimens, including the type, and 4 mounted photographs have been examined by me.

Citations: BRAZIL: Minas Gerais: Lindberg 136 (Br--type, F--photo of type, N--isotype, N--photo of type, Si--photo of type, Z--photo of type); Mosén 641 (N, S); Regnell II.205x (N, S); Widgren 898 (W--1323052), s.n. [Caldas, 1845] (S).

VERBENA LINDMANII Briq., Arkiv Bot. Stockh. 2 (10): 12--14, pl. 3A. 1904.

Synonymy: Verbena lindmani Briq. ex Moldenke, Résumé 368, in syn. 1959.

Bibliography: Briq., Arkiv Bot. Stockh. 2 (10): 12--14, pl. 3A. 1904; Prain, Ind. Kew. Suppl. 3: 187. 1908; Stapf, Ind. Lond. 6: 430. 1931; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 39 & 101. 1942; Augusto, Fl. Rio Grande do Sul 211, 215, & 233. fig. 100. 1946; H. N. & A. L. Moldenke, Pl. Life 2: 69. 1948; Moldenke, Castanea 13: 117. 1948; Moldenke, Alph. List Cit. 3: 665, 703, 745, & 840 (1949) and 4: 1248, 1249, & 1251. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 94, 106, & 198. 1949; Moldenke, Phytologia 3: 75 & 76. 1949; Stellfeld, Trib. Farmac. 19 (10): 166. 1951; Rambo, Sellowia 6: 60, 84, & 153. 1954; Angely, Fl. Paran. 7: 13. 1957; Moldenke, Résumé 110, 127, 368, & 472. 1959; Angely, Fl. Paran. 16: 78 (1960) and 17: 46. 1961; Reitz, Sellowia 13 (13): 110. 1961; Moldenke, Phytologia 8: 147 & 148 (1961) and 9: 113. 1963.

Illustrations: Briq., Arkiv Bot. Stockh. 2 (10): pl. 3A. 1904.

Suffrutescent perennial herb, 0.4--1.1 m. tall, with an Ephedra-like aspect; stems woody, short, tough, incrassate; aerial branches many, issuing from the stem, woody at the base, green, tough, acutely tetragonal, mostly slender and not at all alate, rarely stout and alate, naked, ascending-erect, smooth, glabrous, glaucescent; nodes contracted-articulate, annulate; lowermost internodes very short and abbreviated, 3--10 mm. long, the upper ones 3--10 cm. long; lower leaves sessile or subsessile, small, 1--2 cm. long, 5--8 mm. wide, ovate, toughish, varying from obtuse or subobtuse to acute at the apex, convex along the margins, shallowly and distantly subcrenate-dentate, rounded or truncate at the base, bright-green and sparsely strigose with antrorse hairs on both surfaces, penninerved; upper leaves reduced to very minute and soon deciduous scales, ovate-acuminate, entire, scarcely 2 mm. long; venation noticeable only on the larger lower leaves, the midrib very slender, flat above, prominulous beneath, the secondaries few, very slender and short, somewhat prominulous beneath; spikes dark-violet, usually reduced to ovate densely flowered heads 1--1.5 cm. long and about 6 mm. wide, solitary or in sessile clusters of 3 or a few only at the tips of naked branches, usually borne in the axils of very small caducous scale-like bracts 3--4 mm. long, rarely clustered at the upper nodes, to 3 cm. long, sessile; bractlets ovate, acute at the apex, shorter than the calyx, 3--4 mm. long, antrorsely strigose-pubescent on the back; calyx angled-tubular, about 5 mm. long, with rather rigid antrorsely strigose hairs on the angles, otherwise very minutely puberulent between the veins, the rim 5-dentate with lanceolate subequal teeth much shorter than the tube (the posterior one slightly shorter than the rest), mostly about 2 mm. long and 0.6--0.7 mm. wide; corolla rose, lilac, purple, or violet, small, its tube cylindric to the base, slightly ampliate above, the lobes of the limb subequal, narrowly ob-

long, scarcely equaling the calyx-teeth; stamens 4, didynamous, inserted above the middle of the corolla-tube, included; anthers ovoid, all unappendaged, the thecae subparallel; ovary attenuate to an entire apex, ovoid, at anthesis completely 4-celled, the cells 1-ovulate; style short, about 2 mm. long, included, the apex very shortly 2-lobed, the posterior lobe acutely horn-like, the anterior one subpulvinate and papillose; ovules affixed laterally close to the base; fruit 3--3.5 mm. long, included by the calyx, dry, with a glabrous, smooth, indurated pericarp, somewhat compressed laterally, 4-celled below, the narrow cells separated by a prominent line, not coming apart at maturity, the upper one-third 4-alate; seeds erect, exalbuminous, filling the cells only in the lower part of the fruit.

The type of this curious species was collected in dry sandy-gravelly soil of open fields at Cachoeira, Rio Grande do Sul, Brazil, by Carl Axel Magnus Lindman -- in whose honor it is named -- on the First Regnellian Expedition (no. A.1203) on February 24, 1893. Briquet, in his original description, gives a very detailed account of the amazing fruit structure of this species, a structure which, he points out, is seen nowhere else in the genus even in its broadest sense. It is reminiscent of the monotypic genus Stylodon Raf. of the eastern United States. His comments are worth repeating here: "Cette remarquable espèce appartient au Junciformes Briq. de la section Verbenaca.....Elle est très voisine par son port des Verb. sagittalis Cham. et V. ephedroides Cham. Elle présente à peu près l'inflorescence et les organes floraux du premier, avec l'appareil végétatif du second (rameaux tétragones, à faces non profondément creusées à angles non sunailés, dépourvus des scrobicules si caractéristiques pour le V. sagittalis). Mais le V. Lindmanii s'écarte en outre fortement des espèces précitées par l'organisation de son fruit.

"Normalement, le fruit des Verbena se décompose spontanément à la maturité en 4 akènes, tandis que dans le V. Lindmanii, les 4 méricarpes restent cohérents à la maturité et ne peuvent être séparés qu'avec peine sans endommager le fruit. Il est vrai que quelques Verveines, et cela précisément dans le groupe des Junciformes et des Verticilliflorae paraissent aussi présenter des fruits à akènes cohérents à la maturité. Il en est ainsi par exemple dans le Verbena pseudo-junceae Clos. Cependant le fruit de ces espèces ne saurait être rapproché de celui du V. Lindmanii. Dans ces Verbena, l'akène est généralement oblong, toujours entièrement creux, à cavité entièrement remplie par la semence. Au contraire, dans le V. Lindmanii, la cavité de l'akène et la semence qu'elle contient n'occupent guère que les deux tiers de la hauteur du fruit. Au dessus de ce niveau, les arêtes du péricarpe se prolongent sous forme de 4 ailettes, dépourvues de cavité intérieure. Une section passant par la partie inférieure du fruit montre donc 4 loges séparées par d'étroites arêtes. Aux niveaux supérieurs, la section est cruciforme et les arêtes se

transforment en ailettes. Cette organisation ne nous est connue dans aucune autre Verbénacée. Elle aurait mérité de motiver une coupe générique -- au même tetre que celles qui ont avec raison fair établir les genres Diostea, Neosparton, etc. -- si nous n'avions pas trouvé dans le V. sagittalis Cham. des caractères intermédiaires rattachant le V. Lindmanii au autres Verveines jonciformes ou éphédroides. Dans le V. sagittalis, en effet les 4 méricarpes oblongs sont également pourvus sur leurs marges d'une étroite ailette tout à fait semblable à celle du V. Lindmanii. Seulement la semence remplit tout le méricarpe; les 4 ailettes se rejoignent, en s'atténuant, au sommet du fruit, de telle sorte que la section transversale ne présente pas la disposition cruciale caractéristique pour le V. Lindmanii, laquelle n'est que l'exagération de l'organisation du V. sagittalis.* [*Nous avons pu étudier en détail le V. sagittalis Cham., que nous connaissons d'une façon très imparfaite, sur les nombreux échantillons de Sellow appartenant au Musée royal de Berlin, grâce à l'extrême obligeance de M. le Prof. I. Urban.]

"On ne saurait donc séparer génériquement le V. Lindmanii des Verveines éphédroides. Il n'en reste pas moins que nous sommes redevables à M. Lindman de la découverte d'un type nouveau, très intéressant à tous les points de vue."

The material of V. lindmanii from Argentina is far more husky than typical Brazilian material, has the inflorescences always aggregate not only at the apex of the branches but also at the upper nodes, and has the spikes much longer. More material from all parts of the range, however, is needed before it can be determined finally if varietal segregation is desirable. Augusto (1946) reports the species from Caracol, collected by Edésio, but his fig. 100, labeled "Verbena Lindmanii", actually represents V. alata Sweet.

Lindman's verbena has been found by collectors in dry sandy-gravelly soil of open fields, in campos and dry grassy campos, in rocky fields, and in grassy thickets, at altitudes of 6 to 1000 meters, blooming in October and from December to June, fruiting in March. It was found by Rambo in a region of 1.5--2 meters rainfall, temperature of 0--35° C., and rare snowfall. Malme found his material in grassy campos in mountain valleys. Gross annotated Jürgens 75 as "Verbena bonariensis recht schwache Individuen". Material has also been misidentified and distributed as V. sagittalis Cham. by Osten.

In all, 45 herbarium specimens, including the type collection of both names involved, and 4 mounted photographs have been examined by me.

Citations: BRAZIL: Paraná: Dusén 30 (S), 36 (S), 2584 (Ja--46567), 7345 (S), 7598 (S), 7981 (S), 8324 (N, S, W--1481770), s. n. [Tamanduá, 24/11/1910] (S); Hatschbach 1181 (N), 2896 (N). Rio Grande do Sul: Jürgens 75 (B), 80 (B); Leite 244 (N); Lindman A.1203 (F--photo of isotype, N--isotype, N--photo of isotype, S--

isotype, S--isotype, Si--photo of isotype, Z--photo of isotype); Malme 573 (S), 573a (S); Moldenke & Moldenke 18678 (Es, Lg, N); Rambo 437 (Gg--354738, N, S), 27121 (N), 34722 (N, S), 39697 (W--2046883), 51557 (N, S, W--2102076), 57071 (S). Santa Catarina: Dusén 17938 (S); Rambo 49646 (S, W--2055058); Reitz C.874 [Herb. Jard. Bot. Rio Jan. 54385] (N, Rd). ARGENTINA: Misiones: Ekman 2023 (N); Grüner 803 [Herb. Osten 23179] (N, Ug); G. J. Schwarz 1387 (N), 1814 (N), 2676 (N).

VERBENA LIPOZYGIOIDES Walp., Repert. Bot. Syst. 4: 16. 1845.

Synonymy: Verbena lipozygioides β minima Walp., Repert. Bot. Syst. 4: 16. 1845. Verbena lipozygioides Walp. apud C. Gay, Hist. Fis. Chile Bot. 5: 11. 1849.

Bibliography: Walp., Repert. Bot. Syst. 4: 16. 1845; Schau. in A. DC., Prodr. 11: 551. 1847; C. Gay, Hist. Fis. Chile Bot. 5: 11--12. 1849; Hook. f. & Jacks., Ind. Kew. 2: 1179. 1895; Briq., Ann. Conserv. & Jard. Bot. Genève. 10: 104. 1907; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 1], 42 & 101. 1942; Moldenke, Alph. List Cit. 1: 40 (1946) and 3: 687. 1949; Moldenke, Phytologia 3: 75. 1949; Moldenke, Known Geogr. Distrib. Verbenac., [ed. 2], 101 & 198. 1949; Acevedo de Vargas, Bol. Mus. Nac. Hist. Nat. Chile 25: 57. 1951; Moldenke, Résumé 122 & 472. 1959; Moldenke, Résumé Suppl. 2: 12 (1960), 3: 39 (1962), and 4: 5. 1962; Moldenke, Phytologia 8: 204 & 401 (1962) and 9: 70 & 117. 1963; Moldenke, Résumé Suppl. 6: 6. 1963.

Perennial herb, suffruticose at the base, procumbent or to 15 cm. tall, canescent-strigose or -hispidulous to tomentose-pilose throughout, with glandular-viscid hairs intermixed; stems rooting at the base, tetragonal, nodose, many-branched; branches prostrate or ascending, short, slender, fastigiate, of equal length; leaves decussate-opposite or fasciculate, small, with short proliferations in their axils; petioles short; leaf-blades 6--15 mm. long, bipinnatifid-multipartite or pinnatifid, glandular-pilose and canescent throughout, the segments very narrowly linear, short, obtuse at the apex, almost always entire, revolute- or subrevolute-margined, 1-nerved beneath, the midrib conspicuous on the lower surface; spikes terminal, subsessile or short-pedunculate, 2.5--5 cm. long, capitate or subcapitate, densely many-flowered, canescent throughout, finally elongating and becoming oblong after anthesis; bractlets linear or linear-subulate, slightly shorter than or equaling the calyx, glandular-pilose, ciliate-margined; calyx tubular, 4--8 mm. long, smaller and shorter than in related species, unequally and acutely 5-fid, strigose on the outside, the 5 teeth subequal and linear; corolla varying from light-pink or flesh-color to white, glabrous outside, its tube half again as long as the calyx, usually about 9 mm. long, pilose in the throat, the limb 5-parted, the lobes obovate, medium in size, emarginate at the apex; dorsal anther-appendages small, included or subequaling the corolla-mouth or slightly exserted.